F-35 Needs More Potent Adversary Services

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ARLINGTON, Va. — The F-35 Lightning II strike fighter is easily able to counter the adversary services aircraft thrown at it in numbers, said an official of an adversary services contractor, who added that the industry is facing challenges in coming up with a realistic threat aircraft for training for high-end combat.

"Nothing gets close to these things [the F-35s]" said Jeffrey Parker, a former Air Force fighter pilot and chief executive of ATAC LLC, a Textron company that provides opposing aircraft for U.S. fighter squadrons and electronic threat simulation against Navy strike groups. "I've flown against the [Marine] F-35Bs down at [Marine Corps Air Station] Beaufort [S.C.] It's an impressive airplane. Even in the hands of students, it's a very capable fighter."

Parker also said that increased adversary services are needed by the Navy, Air Force and Marine Corps to reduce the fatigue-life toll on use of the services' own front-line fighters and their limited flight hours in the adversary role.

The Navy "has a shortage of readiness training, so they're reaching out to industry to try to solve that problem," Parker said. "They're using too much 'gray air' [warfighting aircraft]."

He said each adversary aircraft that flies 250 hours a year is the equivalent of freeing an F/A-18 Super Hornet for fleet use for a year. Ten ATAC aircraft in use for 250 hours each can extend the lives of 10 Super Hornets per year.

The Navy has three squadrons of dedicated adversary aircraft with third-generation F-5 or fourth-generation F/A-18 fighters and the Marine Corps fields one squadron of F-5s. The Navy's Topgun school also uses F/A-18 and F-16 adversary aircraft. The Air Force operates two adversary F-16 squadrons. Companies like ATAC use foreign-built aircraft such as the supersonic F-21 Kfir and slower Hawker Hunter to supplement with adversary services.

"The Navy squadrons are hurting on aircraft," Parker said. "They don't have enough. They're also trying to upgrade their training from third-generation aircraft like F-5s to fourth-generation aircraft like F/A-18s and F-16s.

"The aircraft shortages in training are made worse by the F-35 fifth-generation aircraft, which you need a lot of 'bad guys' for," he said.

Parker told *Seapower* that more fourth-generation fighters are needed to meet the increasing demand for adversary services, but that "not enough fourth-gen aircraft in the world are available to industry. Nobody can provide it all, nor can all of us [the adversary companies] provide it together, at least in the next five years or so."

Because of restrictions in U.S. law, the adversary contractors cannot purchase or lease fourth-generation fighters from the U.S. aircraft in desert storage. As such, they go to foreign nations like Israel for retired jets to bring to the United States.

The Navy has issued a draft Request for Proposals for fourth-generation adversary services for the Naval Aviation Warfighting Center at Naval Air Station Fallon, Nev., looking for F-16- or SU-27-like capability with an upgraded radar.

“There’s only one category of radar [that can meet specifications] — an AESA [electronically scanned array radar],” he said.

For cost reasons, Parker said, single-engine jets are needed, rather than two-engine aircraft.

The ability of the F-22 Raptor and F-35 to track and engage large numbers of aircraft means that large numbers of adversary aircraft are needed to provide a realistic scenario for training the pilots. For example, the Air Force stations a number of T-38 supersonic trainers at Langley Air Force Base, Va., to provide enough bogeys to challenge the F-22s based there.

“The Raptor is such an uneven fight, that if you send out two Raptors against anything else, there’s no challenge, no work for the pilots to do. For a ‘two-ship’ they want 12 bandits.

“What we see going on is a maturation of the industry” he said. “By going to the fourth-generation level, the Navy is acknowledging that these programs are going to be around and integrated at the highest levels, because now they have radar; pulling 9 gs [nine times the force of gravity] at the merge; [and] helmet off-boresight capability.”